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Hello. My name is Carlin Starrs, and I am here representing the University of California's Center for Forestry¹ and the Center for Fire Research and Outreach².

We are encouraged that the team is articulating how carbon goals fit with other goals for all of California's diverse forests and is engaging stakeholders to promote innovative approaches.

The California Forest Carbon Plan Concept Paper uses many different definitions of the climate benefits related to our forests. For California to be a global leader in increasing the global climate benefits we can get from forests, we suggest that California use a consistent approach to accounting for the climate benefits and impacts related to forests and forest products. In this very room in December 2015, Werner Kurz from the Canadian Forest Service described an approach they have developed that is fully compliant with the most recent guidance from the Intergovernmental Panel on Climate Change (IPCC). His presentation and related papers are available on the Center for Forestry website³.

In particular, it will be very important to clarify how harvested wood products can fit into climate mitigation strategies, as there are significant opportunities to promote innovations to increase the efficiency of how they are produced and to reduce future emissions from our current 'less than optimal' recycling efforts. These pathways are shown in the 'Mitigation Strategies: Need for Systems Perspective' figure on the next page that comes from Werner Kurz's December 2015 presentation (Figure 2). Given that many wood framed homes in cities like Berkeley are over 100 years old and that modern landfills can store waste wood essentially forever, including the carbon sequestration and substitution benefits into scenarios will be critical for accuracy.

Since carbon is only the latest value we ascribe to California's many forests, developing a shared understanding of the relative importance of different benefits and co-benefits for the major types of forests is important. For example, it may make sense to consider the anti-fragmentation strategy for forests under the threat of residential conversion to be 'urban forests' as opposed to working forests, where sustainable forest management and the judicious reintroduction of prescribed fire is feasible. It is also important to consider our cherished parks, wilderness areas, and roadless areas as 'reserve forests' with their own unique set of values. For discussion, we present a rough cut of climate benefits by three different forest types (Figure 1).

Thank you for the opportunity to comment on this important work. Please feel free to contact myself or my colleague, Dr. William Stewart, with any questions or comments.

Sincerely,

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¹ <http://ucanr.edu/sites/cff/>

² <http://ucanr.edu/sites/cfro/>

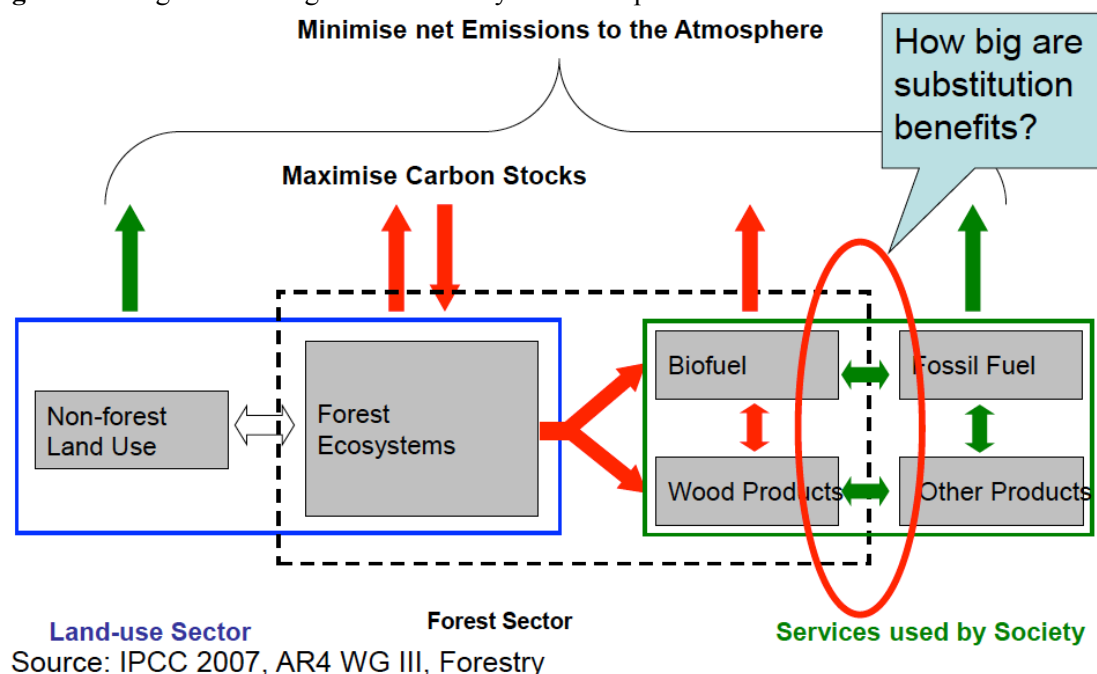
³ http://ucanr.edu/sites/cff/2015_William_Main_Seminar_Series/Forest_Carbon_in_Canada/

Figure 1. Rough cut estimates of climate benefits on a per acre basis (5-highest, 0-lowest)

Type of climate benefit or risk	Urban	Working	Reserve
Net in-forest carbon sequestration	2	5	5
Risks to forest health and loss of carbon	-3	-5	-3
Timber product carbon sequestration and substitution	1	5	0
Bioenergy carbon substitution	2	5	0
Watershed protection	3	5	5
Wildlife habitats	2	4	5
Biodiversity	2	4	5
Open space and recreation	5	3	4
Human habitat enhancement	5	2	1
Economic activity benefits	2	5	1

The greatest social return on new investments will vary depending on how different types of benefits (and risk avoidance) are considered. For example, while planting urban trees is more expensive per tree, they have much greater human habitat enhancement benefits per tree. On the other hand the ability to reduce risks to forest health and the potential loss of climate benefits are greater in the working forests than our reserve forests where lack of roads and legal restrictions limit treatment options.

Figure 2. Mitigation Strategies: Need for Systems Perspective



Source: Kurz, W. A., C. Smyth and T. Lempriere (2015). Forest sector contributions to climate change mitigation: opportunities from Canada to California. William Main Seminar Series. Sacramento, CA, University of California Center for Forestry. http://ucanr.edu/sites/cff/2015_William_Main_Seminar_Series/Forest_Carbon_in_Canada/

This conceptual diagram from the 2007 IPCC report illustrates the interlinked character of overall land use, the forest sector, and the services used by society that need to be considered when crafting state or national level approaches to minimize net GHG emissions.